

AMATEUR RADIO



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AMATEUR RADIO

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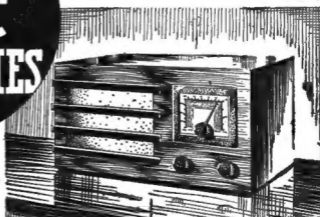
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Editorial

A problem that is receiving the mature consideration of National Amateur Bodies throughout the world, is that of the subdivision of the 7MC Amateur band into channels which would be of greatest value to the Experimenter.

The proposal was originated by a member of the Society of the I.A.R.U., and presented in the December, 1935, Calendar and is briefly as follows. The proposal concerns the ever growing problem of international QRM on the 7MC band. This interference is bad enough when it results from the conflict of Code Stations, but when the problem includes also Telephony Stations complications are more pronounced.

The position is most serious in Europe where many nations allow their Amateur Stations to wander haphazardly around the Amateur bands.

The actual subdivision was as follows: 7000 to 7200 KC all communication within a given continent, 7200 to 7250 KC for stations other than in Europe and North America desiring contacts with the mentioned continents. 7250 to 7300 KC for Europeans desiring to contact stations of other continents.

At that stage in Australia, proposals of the variation of the regulations to more or less cover the trouble was being fostered so it seemed superfluous to comment. However, in a more recent calendar of the Union the reactions of some 16 National Amateur Radio Bodies were published, and by far the majority of these are in favour of some subdivision either by agreement, or by variation of the International Regulations, at the forthcoming Cairo Conference. To sum the reactions recommendation would read as follows:

1. Either a subdivision as proposed, or the abolition of 7MC Telephony.
2. Insist on Frequency Stability.
3. Make greater use of the 7200-7300 KC band.

Happily we in Australia do not have to put up with the atrocious signals that often originate from Europe, but if this proposal is made and the amendment to the regulations adopted, then we will have to fall in line, when we have to a degree cured our troubles by the recent variations to the regulations.

The problem does not only centre on the greater number of stations coming on the air each year, but changes to supposed mediums that effect skip distance and conditions.

A few years ago on the 7MC band one was reasonably sure of having distance contacts at night, without the bedlam created by Interstate, and semi local stations, but not so to-day, when stations from all over the Commonwealth break through at practically equal signal strength during most evenings of the year. This would of course be more pronounced in Europe with so many countries in such a small area. Something must be done and something will be done if the majority of Amateurs in the world have their way, but the most feasible way seems to be in the effective controlling of stations throughout Europe where the trouble centres, and to the next issue of the I.A.R.U. Calendar must we look for that solution.

The VK2JX Super

(By Peter H. Adams)

In designing a new receiver the following requirements were laid down. It was decided that the ideal amateur receiver should have:—

1. High Sensitivity
2. Low Noise Level
3. High Selectivity
4. Good stability

As well as the above it should have single control tuning, and band changing should be as simple as possible. Finally, the desired performance should be obtained at the lowest possible cost. By this, it is not meant that each tube should be made to do three jobs. If the one tube could be made to do three jobs as well as three tubes would, well and good, but this rarely happens in practice.

Requirement No. 3, high selectivity, definitely rules out the TRF or autodyne job. When it comes to weak signal selectivity, the autodyne can hold its own with the super, but the selectivity of the autodyne falls to a very low order when dealing with a strong interfering signal. With a TRF receiver used until recently by the writer the signals from a 100 watt station, half a mile away, spread over approximately half the 14 mc band (200 kc). Using the super to be described in this article this station spreads at the most 20 kc.

The next question to be decided was whether an RF stage should be used ahead of the converter tube. Now a well designed RF stage can be made to have a stage gain at 14 mc of about 20. This can be increased considerably by the use of regeneration, but a limit is reached when the stage oscillates. Regeneration can instead be applied to the converter tube, but not to both. In either case there are three sharply tuned circuits to be kept in line, and if either one is out of alignment much of the gain is lost.

Now without an R.F. stage but with regeneration applied to the converter tube very high sensitivity can be obtained just before the point of oscillation; with an R.F. stage ahead of the converter the tendency towards oscillation is greater, due to stray coupling between the RF stage and converter, and consequently oscillation commences before the maximum gain due to regeneration in the converter is reached.

From the above it will be seen that unless very careful design and extensive shielding is employed it is doubtful if much or any extra sensitivity can be obtained from the addition of an R.F. stage to a regenerative first detector. Furthermore, the idea of having three separate box shields, one for each tuned circuit makes band changing extremely cumbersome.

OSCILLATOR COUPLING

Having decided to eliminate the R.F. stage the next point to be decided was oscillator coupling. As first made up the oscillator was a 56 tube in a cathode tap Hartley circuit with the "hot" end of the grid coil connected to the suppressor of the 57 converter tube. Of course, a 6L7 tube could have been used as a converter and on paper it looks a better tube for the job. However, my own experience with metal tubes in the commercial field has left me with little confidence in them, and it was decided to play safe and stick to glass.

Whilst coupling with the hot end of the oscillator coil gave fair results, there was considerable "pulling" between the two circuits and bringing the converter grid circuit into recordance with the signal caused detuning in the oscillator circuit. Numerous coupling schemes were tried in an effort to overcome this trouble and the arrangement finally adopted consisted of coupling

directly from the cathode tap on the oscillator coil to the suppressor of the converter. This produces only very slight detuning and results also in smoother control of regeneration.

REGENERATION

Regeneration is controlled by varying the screen voltage on the 57 tube. This appears to be a much more sensible method than the more generally used, but extremely crude, system of short circuiting a small coil coupled to the earth end of the grid coil by a variable resistance. This latter method must produce detuning as well as introducing unnecessary losses.

I.F. AMPLIFIER

The next point to be decided was whether the I.F. amplifier should have one or two stages, iron or air coils, and at what frequency it should operate. Now, in a superhet the major portion of the inherent set noise arises in the first detector; therefore, in order to get a high signal-noise ratio it is desirable to get as much gain at the signal frequency as possible and keep the I.F. gain reasonably low. Hence all the gain required can be obtained with one I.F. stage and furthermore it is not necessary to resort to regeneration in the I.F. stage or second detector.

However, regeneration in the I.F. stage can increase selectivity, but it has the great disadvantage of increasing the I.F. gain at the point of maximum selectivity to a figure that is altogether too high. As an alternative regeneration may be applied to the second detector. This has one advantage; it permits the beat oscillator to be omitted. At the same time it has a serious disadvantage. Suppose the I.F. transformers are aligned at a frequency of, say, 460 kc with the second detector just below oscillation. Then, in order to receive a C.W. signal the second detector is put into oscillation and to produce a 1000 cycle beat the H.F. oscillator must be so tuned as to produce an intermediate frequency of 459 on the 461 k.c. Either of these signals is 1 kc away from the frequency to which the I.F. transformers are tuned and consequently the full selectivity of the I.F. stage

is not realised. Actually, a receiver such as this would, with good intermediates, amplify an interfering signal 1 kc on one side of the wanted signal more than the desired signal itself.

On the other hand, the receiver with a regenerative second detector could be aligned with the second detector in oscillation. In this way the grid circuit of the second intermediate could be tuned either 1 kc higher or lower than the intermediate frequency. This would be desirable for C.W. reception, but when used for phone work the second intermediate would be out of alignment. Hence a separate beat oscillator would appear desirable in every way.

The intermediate frequency chosen was 252.5 kc. It has been found in laboratory tests that with air core coils at this frequency it is possible to obtain slightly more selectivity than with iron core coils at 460 kc.

However, I.F. transformers for this frequency are likely to be difficult to obtain, and there is no reason why well designed iron core 460 kc transformers should not give as good results. However, some decoupling may have to be added to ensure stability at this frequency.

SECOND DETECTOR

It is well-known that a diode detector adds serious damping to a tuned circuit and it has been claimed that one I.F. stage feeding a bias detector gives as much selectivity as two I.F. stages feeding a diode. A bias detector was therefore decided upon, and in performance this receiver bears out this statement.

For the second detector and audio tube a 53 is used. At first the circuit used by Jones was tried. This was fairly satisfactory, but not as good as might be expected on weak C.W. signals. No doubt, this is due to the fact that both sections of the tube have the same bias, and as one section should be biased almost to cut off and the other should operate as a normal Class A amplifier, it is obvious that the operating conditions are incorrect with this arrangement.

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The circuit finally adopted gave much better results. It will be seen that a 300 ohm resistor is placed between B— and earth and separate bias voltages for earth section of the tube are tapped off from this resistor. With this arrangement switching on the beat oscillator can be made actually to increase the sensitivity instead of decreasing it as usually happens.

BEAT OSCILLATOR

The beat oscillator is a 58 tube in a cathode tap Hartley circuit. The coil used consists of 500 turns honeycomb wound on a $\frac{1}{2}$ -inch wooden dowel tapped at 100 turns from the earth end. This is tuned by an intermediate trimmer shunted by a 3-plate midget to provide panel control of the beat note. Coupling to the second detector is fairly weak, yet strong enough to heterodyne a strong local signal. Strong beat oscillator coupling reduced sensitivity on weak signals. The oscillator used is electron coupled, the output being taken off across a 5000 ohm resistor in the plate circuit of the 58 and fed to the grid of the second detector through a very small condenser formed by twisting a piece of hook up wire once around the grid lead. The B.O. is provided with an on-off switch on the panel.

STABILITY

So far no mention has been made of stability which for an amateur receiver is of almost as much importance as sensitivity. It should be possible with a good receiver to hold a signal for half an hour at a time, if necessary, without touching the controls, and it should also be possible to lift the receiver bodily an inch or so off the table and then drop it without the oscillator frequency shifting.

This can only be achieved by rigid mechanical construction and wiring, especially in the high frequency end. In this receiver the chassis and front panel are 16 gauge steel Cadmium plated for good electrical conductivity and sprayed Newcastle grey on the outside. This together with black control knobs and escutcheon produce a pleasing and business-like appearance.

(Continued on Page 13.)

The Antenna Problem

Many useful articles have appeared in this magazine in regard to antennae, and the following is submitted in the hope that it will be of use to some.

It is often rather difficult for a ham to erect a full wave antenna, when he desires to do so, owing to lack of space. Because of this he struggles along with a half-wave antenna with the thought uppermost in his mind that if he had a full-wave antenna he could do much greater things.

Then there is the chap with his antenna running in a certain direction which has certain directional effects radiating better to some parts of the globe than to others and he wants to reach those other parts. As he has not the room to erect another antenna or to swing his whole antenna around or to put up reflectors he has to go without.

Now all these troubles are definitely over at last. The reason is in the following:—

The antenna to be operated upon is a Zeppelin type with quarter or three-quarter wave feeders and is a full wave long. Half way along the flat top erect a post or a chimney and at this point turn your antenna at an angle of 90 degrees, shifting your end pole to the new position.

Thus you have a half wave running, say, North and South, and in addition a half wave running East and West radiating all over the globe (you hope). The antenna is not broken in the middle, but runs straight through.

Alternatively, if you already have a half wave antenna up and no room to continue straight along for another half wave try tacking the extra half wave on at right angles and watch how much better your signals go places.

As I had, at one time, difficulty in getting a full wave in a certain space the above was tried and worked very efficiently. I understand 4JU and others are already using this system with success. — VK3CX.

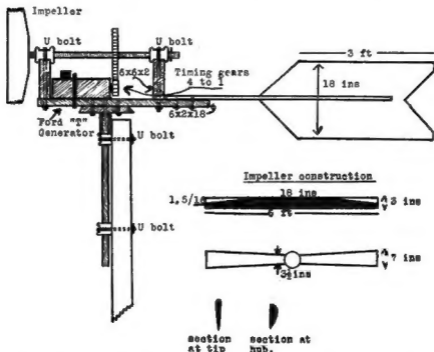
Wind Driven Generator at VK3CE

By R. McNally

The idea of getting power from the wind is, as we all know, far from new, but there are, perhaps, some who are not quite clear on how to set about getting it, and it is with that in view that I am setting out here the results of my experiments along these lines.

The mill in use here now was constructed from junk found in the farm wrecking department; of course

Then the base for the "works," consisting of a piece of 6in. x 2in. hardwood, 18in. long, was bolted on top of the bevel cog by means of 4½in. bolts, but this is not done until the rest of the mill is constructed and the point of balance of the whole assembly is found. Next, two pieces of 6in. x 2in. x 6in. hardwood were cut to form the mounting support of the impeller shaft.



everyone who may want to duplicate this mill may not live on a farm, but once the idea is shown, no doubt they will be able to modify the main construction to suit the gear on hand.

First of all a piece of 1-inch shafting three (3) feet long, with a bevel cog screwed to its end was dug out, and this, together with its bearings, made the turntable; the bearings were secured to a (6) six-foot length of 4in. x 4in. hardwood by means of U clamp bolts of 3-8in. thickness.

This shaft is a piece of 7-8in. steel also from a wrecked farm machine, and its bearings are let into the top of mounting blocks just enough to let them sit snugly when held down by the U clamp bolts which also fix the blocks to the base plate.

The base plate is hollowed out just enough for the gennie to sit firmly in place when held by a hoop iron clamp which passes completely around base and gennie, a wing nut was put on the bolt of this clamp to allow quick and easy removal of gennie for adjustments, etc.

On looking through the local garage junk heap a pair of timing gears were found that gave a gear ratio of almost 4 to 1; this method of drive is used in preference to belt or chain, for there is less wear than with chain, and in my opinion the friction of gear drive is not as great as the pull of a V type belt in its pulleys.

The large wheel is fixed to the impeller shaft and the small one on gennie shaft; then small shavings were taken of the end blocks until the correct meshing of the gears was obtained.

The tail is made from short length of light angle iron (or $\frac{1}{2}$ pipe could be used) to which is bolted the tail piece, cut from flat iron; the tail has not been hinged yet, but I am going to do so, so the constructor can please himself whether he does it at first or later, but if it is hinged it would save climbing up the stand to tie the prop when not in use.

Now this brings us to the most important part, namely, the impeller and success or failure will depend entirely on this piece of work; the construction is not difficult, but a great deal of care should be taken and the time will be well repaid.

It is carved from a piece of Kauri pine, or other soft wood, but must be free from knots, otherwise carving will become difficult; it is 6ft. in length and 7in. wide; it is first roughed out as shown in sketch, and then the carving proper is done with a draw knife, and finished with rasp and glass paper.

The main points to remember are that the front of the blades are straight, that is, when the impeller is placed on a flat surface face down, it must rest all the way along; the back is tapered, the leading edges are rounded off and the trailing edge is sharp, the blade makes an angle of 42 deg. at the hub and 15 deg. at the tip.

If carefully carved not a great deal of balancing will be required, but it was done here by drilling a hole on the "light side," and adding shot until the point of balance was secured. It is very important, how-

ever, that proper balance be obtained, otherwise, apart from vibration of the whole assembly, the revs of the impeller will be considerably reduced.

This impeller, by the way, is capable of about 500 revs per minute in a strong wind. It appears to have plenty of power and, when gears can be obtained, about a 5 to 1 drive is going to be tried, but a higher gear ratio than 5 or 6 is not desirable; in fact, if gear ratio is overdone the thing would be a complete failure, with the gearing used now, which is a little less than 4 to 1, the mill charges up to 10-12 amps in a strong wind, but sometimes there is a breeze sufficient to drive it just to the point of cutting in, and to try to overcome this the higher ratio will be tried.

The 4in. x 4in. was bolted to a pole about 15ft. long, and this was stayed with three others of similar length. The current was taken from the gennie by means of a length of double flex which is allowed to hang in a loop and it has seldom had to be unwound.

I have found this little job very handy for keeping the filament batteries of my transmitters and receiver charged, and there is usually sufficient wind at least one day per week to give a charging rate of from 4 to 6 amps.

In conclusion, I would be only too pleased to assist anyone building a similar mill should they meet with any difficulties.

BRAINSTORM FOR "AMATEUR RADIO."

Why not use an immersion heater as tank inductance in 5 MX unity coupled circuit? The element to be the grid coil, the copper heater the plate coil, and the connection will make an admirable coil socket, with terminals complete. It would be only necessary to shorten the two "legs" of the heater to obtain correct inductance, and the nickel-plated unit is complete.—2DR.

"Amateur Radio." — The YL who wanted to know if a watt hour meter was a clock.—VK2YA.

Station Description

After waiting for a real wet Sunday, 3SU and 3DP started off to give 3VW, Geoff. Stobie, of Bell Street, Heidelberg, the once over.

After much engine trouble and several spills on the muddy roads, we finally reached the shack looking like drowned RF bugs. Calling CQ on the wall, we were hailed in the usual ham manner by 3RV, one of the Preston fone fans. Stumbling over junk, etc., we found ourselves gazing at the works open-mouthed. Geoff. was busily engaged with R.A.A.F. Reserve skeds, so 3RV gave us the low-down. The rig was a breadboard type 2a5 E.O. to 46 P.A. Rx is a

two-tube job with A415 and A409. The ant. is a half-wave 7M/c.

VW started up in July, 1934, and has worked some fb DX in 41 countries. W.A.C.-W.B.E. He is also a fone (?) fiend, using single-choke Heising wld a mod. 250, and pair 227's for speech amp. Being a section leader for the Reserve, he is kept very busy on Sundays.

As time was wearing on and we had waited in vain for VW to turn it on, we rescued our mobikes from the mud and returned back to civilisation, quite happy, but wetter than ever.



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one as audio meant 2 volts at .24 ampere, getting into the greedy class. So the ever faithful 30 was called to the rescue, and the result is the monitor outlined. Experimentation showed that the 49 used with extra grid and control grid reversed makes a good space charge audio amplifier even with as low as 9 volts on the plate. As a simple oscillator, the 30 performs (at low frequencies, 1500 to 550 KC) with the same voltage on the plate, if the value of the plate coil for feed-back is increased in inductive value appropriately. With 18 volts on the plate it oscillates merrily with plate coils having only a slightly larger value than normal. Here we are then; a monitor calling for only 18 volts of B battery (from two 9 volt C batteries) and two small 1½ volt cells. The whole goes into a remarkably small metal box, and one doesn't have to fish for a weak signal from a very QRP transmitter; because of the audio gain. The two valves take less filament juice than a single 19 used similarly, with the added advantage of the small plate supply. The diagram is self explanatory, and coils are used as in the A.R.R.L. Handbook for a monitor using 50 mmfd tuning capacity, but with one or two more plate turns to ensure oscillation. The writer has also built up a small portable receiver on these lines, with plug-in coils, covering from around 15 to 600 metres, and with a reasonable antenna, it pulls in American phones on "20" quite easily. If the idea is applied to a receiver, the AFT should have a high ratio, and the .002 mfd fixed condenser be replaced by a .0025 mfd variable for reaction control. A .00014 mfd condenser is then used for tuning, and an R.F. choke included in series with the 30 plate as usual. By using a combination filament jack, the filament battery switch can be dispensed with, and the 10 ohm rheostat can be substituted for a 5 ohm fixed resistor. The suggested monitor is the outcome of such a receiver, and apart from this the value of such an arrangement for a pocket receiver for field days will be apparent.—

Federal and Victorian QSL Bureau

VK3RJ Federal QSL Manager

W9LW advises that she met VK3AL. Alf, VK3AL, must have sneaked off very quietly.

Wanted by this Bureau, the QRA of SX3A. Anyone supply please?

Listeners are enquiring as to whether prizes in the receiving section of the forthcoming VK-ZL DX contest are restricted to members of the W.I.A. Some doubt also exists as to what governs the number of countries. Could Java and Sumatra be classed as two separate countries?

Small things have far-reaching consequences, and Victoria's chances of annexing Fisk Trophy were materially reduced by nothing more than a bottle of ale. The heat of the contest caused writer to become parched, and on the first Saturday evening of the test it was decided to keep things cool by topping off a couple of bottles of "home brew." The first bottle was excellent, but the second exploded during the opening ceremony, drenching the transmitter, receiver, power gear, and the QSL manager. Result, VK3RJ off air until the following week-end, when gear only so so. Some brew!!

3HK and 3YK located at One Tree Hill during the five metre field day recently conducted by the "POOFS"; think they heard a VK7. The call sign sounded like VK7LY. 3HK has the exact time logged and would be glad to hear from any VK7 who was on five MX that Sunday.

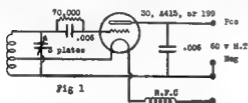
Cards are on hand at the Bureau, 23 Landale St., Box Hill, for the following VK3's:—AD, AP, AT, AX, BL, BS, BX, CA, CK, CM, CW, DG, DK, DS, DQ, DZ, EO, ES, ET, FG, FM, FN, FQ, FZ, GJ, GM, GT, HB, HE, IL, JK, JW, JZ, KG, KM, KV, LK, LQ, LS, LY, MX, NA, NG, NR, NT, OI, OP, OX, OZ, PA, PG, PH, PS, QO, QP, QX, QZ, RM, RN, RW, RJ, SP, SU, TE, TG, TO, TW, UJ, VL, WC, WD, WH, WX, XK, XU, YF, YL, YW, ZK, ZL, ZO, ZW.—Dinan Hampton Freeman.

A FIVE METRE MODULATED OSCILLATOR

FLEXIBILITY WITH CRYSTAL CONTROL

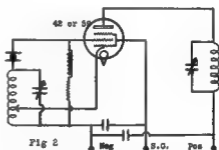
The comparison of receiver performances on 56 mc is rather hard to judge when tests are made by listening to transmitting stations. We know that conditions vary, and that slight alterations to a transmitter can cause changes in signal strength in one way or the other, so that to check performances over the air might prove misleading. The

The one bugbear of using CC when a stock of spare crystals is not kept is the lack of flexibility in frequency variation. Although not the writer's idea, this tip may be of use to those chaps using Tri-tet crystal oscillators and at times experience bad QRM. As may be seen in Fig. 2, the only difference to a Tri-tet circuit is the fact that the cathode is taken to a

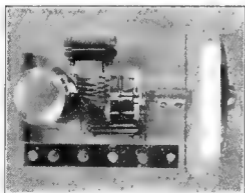


oscillator depicted in the photograph and diagrammatically drawn in Fig. 1 is electron coupled and self modulated. Such a test instrument is easy to make and well worth making.

The combination of the grid leak and condenser values given interrupts the oscillations into 300 cycle groups. A high tension supply of 60 to 120 volts may be used according to the strength of signal required. At 120 volts the plate current is about 2 mills. The filament



tap on the oscillator grid coil just as in the case of an electron coupled oscillator circuit. This allows one to shift the frequency of the oscillator but still maintain the note and stability of CC. The circuit has been fully tried out and is worth using.—VK5KL.



tap for the electron coupling is made at about $2\frac{1}{2}$ turns up from the earth end. Naturally the R.F.C. must be wound with wire of sufficient gauge to pass the filament current without loss; 20 gauge is used in this oscillator and there are 30 turns on the $\frac{1}{2}$ in. former. The baseboard measures 6 in. x 4 in. x $\frac{1}{2}$ in., and the panel 4 in. x 4 in.—VK3ML.

The 3WG-3UK-3ML five metre field day party claims to have been the most powerful station yet taken out into the bush. The actual and measured power in the transmission line was 2.984 Kw. Yeah, four big "drafties," representing 746 watts each, ambled up and got tangled in the 100ft. feeder!

(Continued from Page 7.)

The above discussion of the design features of the receiver have of necessity been more or less general. However, the concluding half of this article, appearing in next month's issue, will cover full constructional details, together with the circuit diagram and photographs. Figures for actual measured sensitivity and selectivity will also be given.

De Mortuis Nil Nisi

Down the shorter metres, where we
parked our jugs and tweeters,
And showed the scoffing theorist
what we'd frund,
With a little two-valve "blooper" (no
screen grid, hence no super),
A gang was born that made DX go
round.

There the Yank, 500 cycle, thought
8000 miles a trifle,
To the "Aussie, "way down under,"
'neath the Line;

And we, with fingers itching, set their
Baldwin fones a-twitching,
Till one and all agreed our game
was fine.

What cared we for the jamming, when
the Yankee syncs. were slamming
CQ into our tuner, broad and
strong?

A man could always copy, few
punchers' fists were sloppy,
Sure 50 million key men were not
wrong.

Then a chiel by name of Helsing, a
novel scheme devising,
Disburbed ideas to speak across the
sky;

So our little 2-tube "blopper," the
screen-grid and the super,
Were "hotted" up to give "this
fone a fly."

B.C. listeners grabbed the story how
fone in all its glory
Was used by hams—the key had
lone its dash—

So, in shorter wave migration, they
sought for more elation,
To come, the records show us,
quite a crash.

But when crystal perked for Taylor
—the rumpus, Holy Whaler—
The trader cashed in on it PDQ.
Gone the big wide open spaces, gone
the happy smiling faces,
Gone in side-band slush the sign
we used to "chew."

"Ouz by bodulation?" was heard at
every station,
And rare the foreign signal that
happened to come through;
Soon amongst recruits arriving a sec-
tion was heard striving,
The broadcast station technique to
attain.

Our Morse was lost in crooners, irre-
spective of our tuners,
We reached below and raised the
power again.

I could amplify this story—the censor
frowns no gory
Story may ensoul this tale.
So I'll hie to twenty metres, leave 40
to these bleaters.

Ah! Grand! she notes! The meter
hops its scale.

But, Hell! There's music surging; I
can hear its edges splurging;
Am I off band? The growler tells
no tale.

I scratch a match and ponder, scan
my cards pegged over yonder,
And hold the "gain" until this "off
band" signs;

The tobacco smoke ascending scrolls
a most Baltasar ending—
Yap-yap, Yap-yap, another gramo.
grinds.

—Dummy Aerial DX.

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Five MX Field Day

Getting off with a flying start in glorious weather the third Vic. 5 mx field day kept going with a whiz. 3DH, HF, HK-YK, KQ-VH, ML-UK-WG, OF-JJ, PL-PW, UH and UR went on location, while 3BQ, HZ, LG, OT, WX, WY, XA, XM and XJ through lack of portability and time remained at their home locations.

3KQ at Mt. Macedon to 3HZ at Caulfield was the first qso of the day. After that they followed thick and fast. It sounded like 40 mx gone mad. 3ML pushed out a fat R max sig from Wallan to Arthur's Seat and thus proved that hearing 3MR on the first field day was no mere fluke. Sensation was caused when 3KQ and 3PL were both heard calling 3RS. It proved a false alarm. They were only calling him on spec.

3UH at Gisborne claimed that he heard no one and that no one heard

him, but 3OF at Arthur's seat heard him at R8. This has since been checked up with the logs and proved OK. 3UR at the You-Yangs and 3KQ did not qso all day, although not so far apart. Evidently there was some hill in between them. Despite a broken down car and a broke down receiver 3DH made up for 1st time when hen got going from Mt. Dandenong. Heard three stations calling him at once. The beam at 3UR raised his signal level from R3 to R max at 30F.

3HK put out a good signal all day from One Tree Hill, while consistently strong phone came from 3PW. 3HF at Diggers Rest put in much time at duplex work.

3OF at Arthur's Seat encountered a steady fade in all signals up to about 1 p.m. R8 to R4 over 30
(Continued on Page 17.)

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Editor of "Amateur Radio."

Dear Sir,—The following was received by me from ZL3BK, of NZART Publicity Department, for September issue:—

ZLICD rendered valuable assistance in getting the message through O.K.

I am, yours faithfully,

Jim Stevens, VK3ZK.

To the Editor of "Amateur Radio," Melbourne, and also South African Publicity Department, per Australian - South African Schedules.

Re special 5-metre transmissions.

The following schedules will be kept by ZL3GD or ZL3XB on 5 metres.

The transmissions will be from Mayfield, N.Z., and will consist of a wave modulated at about 250 cycles per second.

The call VVV VVV de ZL3GD repeated throughout transmissions.

The antenna, which is very directional, will be placed in a large number of directions during each transmission, and the direction will also be transmitted.

Overseas amateurs and listeners are asked to listen throughout the transmission on 60 megacycles, and to repeat any reception to Radio RL3GD, Mayfield, New Zealand.

Even if not received, ZL3GD will be pleased to hear from anyone who listens during these schedules.

The times are as follows:—

From 0000 to 0200, also 0600 to 0800, and 1000 to 1200 GMT, on September 5th and 19th; also October 3rd, 17th and 31st.

In addition to the above schedules, instantaneous spark transmissions will be directed towards the moon on September 2nd at about 1200 GMT, in an attempt to demonstrate the possibilities of reflections being obtained from its surface.

Such waves would not, however, be receivable on an ordinary receiver, but it is hoped to be able to receive these lunar reflections in New Zealand on a special receiver now under construction.

This transmission may be accompanied by an ICW one of the above form, using the call sign ZL3XB, and also directed towards the moon. So if anyone has the moon shining during that schedule they are asked to listen. It may even turn out that reflections are heard overseas, and not in New Zealand.

(Signed) ZL3BK,

NZART Publicity Department.

The Editor, "Amateur Radio."

Dear Sir,—Through the medium of your columns, I wish to bring a future important matter before all members of the W.I.A. interested in the practical value of amateur emergency communication.

Many will no doubt read in the daily press of the organisation of the 1938 "Round Australia Motor Contest." This contest is one of great importance to Australia, and will attract widespread interest throughout the world. After many preliminaries had been discussed, the writer was asked to join the organising committee to advise on the possibilities and importance of emergency radio communication. At a meeting held in Sydney on 6/8/36, the suggestion was made by the writer that Australian radio amateurs could be of great value during this contest, if even in a supplementary manner to existing commercial services, including the Australian Inland Mission. The route to be taken through the Northern Territory and North-Western Australia includes many stretches where tracks are not of the best, and communities very scattered. Specially equipped mobile truck stations operating on amateur frequencies would be vitally important in these areas. In view of the many

considerations, the meeting decided to approach the Department for permission for amateur co-operation during this contest. Should such permission be forthcoming, I feel sure that the organisation of some useful emergency communication scheme would be an excellent opportunity for the W.I.A. to demonstrate to the Commonwealth that there are within our ranks first-class telegraphists who can do a good job when needed. Although the organisation of this contest is only in the embryo stage, and 1938 is yet a long way off, it is never too early to start planning. May I suggest that all members of the W.I.A., who would be interested and willing to offer their personal services, time on the air, or even equipment in a mobile capacity, if the opportunity arises, drop me a line or give me a call at any time in the near future? It must be understood that, so far, everything is at the suggestion stage. Amateur co-operation may not be considered necessary officially, but if it is, then I hope that all W.I.A. members will realise the importance of showing the world that they are just as useful for emergency organisation as amateurs in U.S.A. are in the eyes of their Government.

Yours faithfully,

Don. B. Knock, VK2NO.

Vice-President N.S.W. Division,
W.I.A.

TRANSMISSION SCHEDULES

OCTOBER, 1936

VK2ME

Sundays—

Sydney Time	GMT.
3.30 p.m.- 5.30 p.m.	0530-0730
7.30 p.m.-11.30 p.m.	0930-1330

Mondays—

12.30 a.m.- 2.30 a.m.	1430-1630
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VK3ME

Nightly Monday to Saturday (inclusive)—

Melbourne Time	GMT.
7 p.m.-10 p.m.	0900-1200

REPORTS RECEIVED

Stations worked and their strength.

3KQ, Mt. Macedon, 15 QSO's.—
HZ9, OT9, XA9, XJ5, HK5, OF5, HF8, BQ6, ML8, PL8, LG8, DH8, WX7, XM7, WY7.

3HF, Diggers Rest, 12 QSO's.—
HK, XA, KQ, HZ, ML, PL, OF, WR, UR, WY, XM, PW.

3ML, Wallan, QSO, 9.—HK8, KQ8, HF8, HK7, OF9, PL6, PW6, XA4, OT4, DH8.

3DH, Mt. Dandenong, QSO, 9.—
KQ8, PW7, OF8, HF8, HZ8, WY8, OT8, XM8, ML8.

3HK, One Tree Hill, QSO, 12.—
KQ4, HZ5, HF5, UR8, OT7, OF4, ML6, BQ3, PW4, LG5, WX4, WY3.

3OF, Artur's Seat, QSO, 10.—KQ5, HK7, UR9, ML6, HF4, DH7, OT9, XM8, HZ7, PL9. Heard XA5, WX8, WY3, XJ3, UH8.

3XA, Hawthorn East, QSO, 7.—
KQ9, HF5, WY8, UR8, PW5, ML5, HK4.

Through the week 3ML reported hearing a station that he thought to be a VK5 at 1720 E.S.T. on the field day. 3HK reports hearing a station at 1457 the same day that he read as VK7LY at R3QSA3. The phone was very distorted and made it very hard to follow. Did anyone else hear these? If so let us know. It seems as if 5mx dx is coming fast. Also who were the other unidentifiable stations that were heard by both 3KQ and 3ML? We may find out next field day.

(Continued from Page 15.)

second periods. AT about 2 p.m. all signals reached their lowest level, not one signal being heard over R6. From then on all picked up till they reached their peak strength shortly after 4 p.m., when they all roared in at maximum strength.

3BQ with crystal control and 3LG were not on for long. The other home stations put the day in and were generally very good. The station that was missed the most belonged to the man who made the music go round and around on the last field day. 3XA reports 3KQ as having the most consistent signal and also that fading was bad on all DX stations.

Divisional Notes

N.S.W. Division

W. G. Ryan, Secretary, VK1TL, Box 1734JJ, G.P.O., Sydney.

COUNTRY ZONE OFFICERS.

ZONE 1 (Far West)—

J. Percos, VK1PE, Hope Street, Bourke.

ZONE 2 (North-West)—

H. Hutton, VK1HV, Byron Street, Inverell.

ZONE 3 (North Coast)—

R. J. Berry, VK2NY, 54 Bacon Street, Carlton.

ZONE 4 (Hunter River and Coalfields)—

S. Grimmett, VK2ZW, 161 Tudor Street, Hamilton.

ZONE 5 (South Coast and South-West)—

NORTH SHORE ZONE

2ACJ builds a new rig on an average of one a week. 2ACL worked J2NO on 40 using a 53 C.O. and 45 P.A., his total of countries worked now stands at 8, having caught up with his clobber, 2ACJ. 2BJ transmits on dual waves of 40 and 5. 2DR introduced his friend 4AG to all the North Shore boys during that ham's short stay in VIS last September. 2DU has been in hospital, but has now been repaired and is perking in the final stage OK. 2FV has just about completed his new Super and will soon be back on without QRM troubles. 2GD is only heard occasionally from Roseville. 2HA cannot get a 6P6 from anywhere as supplies seem to have been exhausted. 2HG plays quite a lot of tennis and is neglecting his Ham Radio. 2HL continues to listen on 5 metres regularly and sometimes has the fortune to work somebody. 2HY finds the European DX coming in again on 20. 2HZ missed hearing VK8SC on 40 on 12th September last when that Ham who is 2QL called hm. 2IP enjoyed the Hamfest held by the Zero Beat R.C. recently. 2JU and 2OG work on 20 mx fone together, but sometimes

complain to the other of overmod. QRM even when both are using Supers. 2LZ has joeys either side of his carrier when on CW on 20 to the extent of about ten KC. 2NN can't get a simple 5 mx receiver to go. However, the transmitter shows plenty of RF in the tank ckt, but on what freq.? is another problem for Bev. 2NV plays golf with 2FV and SWL's. The QRI at 2SS sounds unmistakably like Xtal. 2VE is QRL Tec, but hopes to get going properly soon. 2VL renders a CQ on 40 occasionally. 2VN has a 60ft. pole over his Xmtr now. 2VP has shifted his QRA several times during the past few months. 2VQ finds good DX on 20 coming in now. 2WW's flat sounds pretty good and should aid him in his 1st class tkt. 2YA has now no time for Ham Radio, but will find his way back as soon as the new novelty has worn off. 2YC is now on 40 going flat out for the Fisk Trophy which must come to N.S.W. this year.

NEWCASTLE, VK2RG

Congrats to BZ, who collected the Silverthorne-Fairhall DX cup, after only a couple of months on the air. Dave recently clicked FB8 for his first African, and has now worked 8 countries.

OE has been transferred to Yass, and, being a Fisheries' Inspector, we presume that the mortality rate among the small fish at Yass will now rapidly decline.

A special beano was held when Allen Fairhall, KB, returned to the fold after a 3 months' tour of U.S.A. Allen gave a most interesting talk on his travels, and perhaps the highlight was the case of a W6, who was expecting a visit from the R/I, so dropped his input from 11 kw. to 5.

TY rebuilding, also ZW. What, still?

Old club member FX, Frank Cross, made a welcome reappearance at a recent club meeting. The lads are contemplating starting a crime wave so that Frank will be transferred to the district to keep them in order.

Amateur Radio

LAKEMBA RADIO CLUB—VK2LR (Affiliated with the W.I.A.)

(By 2DL)

At a meeting of the above Club held at the Sunrise Hall, Canterbury, some discussions took place on 5 mx conditions. VK2EH made an appeal to members to assist to do some really useful experimental work by going down to five. It was mentioned that during the month both 2OI and 2EH heard VK4DE on the 5 mx band, while 2JE is reported to have heard a ZL. It has not yet been revealed whether these were harmonics, but those concerned are awaiting verification of their reports. It is understood that 2JE has gone up the North Coast of N.S.W. in order to conduct tests from high mountain peaks, with beam aeriels directed on ZL, Sydney and Brisbane.

The club is to have a moving picture night, when Mr. Jack Peckman is to bring along a projector with several thousand feet of film. Mr. Burnett, 2BJ, is also to deliver a lecture on "Frequency Stabilizers."

2EH and 2CY recently had a visit from VK5MZ and VK2YE. It is understood that 5MZ is visiting Sydney with a view to obtaining a commercial license, while 2YE is an ex VK5.

The club's QSL officer, 2QP, requested members when making out QSL cards for dispatch, to make sure that various strange call letters actually exist. As an example he quoted H20, for which station (?) he had received a card!

THE NORTH SUBURBAN RADIO CLUB, CHATSWOOD (Affiliated with W.I.A.)

The licenced call of this Club is VK2ADF, and will shortly be transmitting from its Headquarters at the corner Brown St. and Pacific Highway, Chatswood. The Xmitr consists of 53 CO, 46 Bfr, 10 PA. The antenna being a Marconi on a 40ft. stick. The number of Hams in the Club is 12 and much interest is taken by them. Appreciation is extended to these chaps for the time and work given by them in helping to bring the Club up to the present

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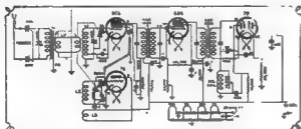
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standard. It is expected that two carloads of Ham members will represent this Club at the coming Newcastle Hamfest on 27th, 28th September, and it is hoped that they will bring back a fair share of the fine prizes to be contested there. 2ACJ is to be specially thanked for his fine effort in donating an excellent receiver to the Club. Other Hams have shown similar actions of generous donations.

MANLY RADIO CLUB (Affiliated with the W.I.A.)

Everyone will be pleased to know that the old club is on the air again and going well. Quite a good lot of fone contacts were accomplished lately with the new rig. Getting ready for 20 meters again, chasing DX.

Our membership is gradually increasing and expect more will be rolling up as the summer season gets around. Here's a chance for any country ham to become a life honorary member of our club; just drop us a line and we'll include your name on our membership, and when you come to Manly (by the sea) look for our board on the wharf, and we'll give you the right royal welcome; so don't be shy, you fellows.

VK2ON, on holidays at Tamworth, has been in constant touch with the Club.

2QK got a good prize for his super at the W.I.A. Exhibition. Some super, too.

2IP has been round lately. What's up, Jeff?

2QF now works a 3 letter call (portable) as well. Expect some good work from you, George.

We were asked how we enjoyed "Zero's" Dinner. Need you ask? And then there's this Newcastle Fest in the offing. Oh, Boy!

Another couple of hams expected from our ranks next exam. Good luck, Keith and Jim.

Meetings, Mondays, 8 p.m. Now come along. Letters to 87 Darley Road, Manly.

NOTES FROM THE BARRIER

Well, boys, the Mag. has been asking for "dope," so here's a few notes on the doings of the hams of the Silver City. First of all, I'd like to mention that the ham population

is rapidly increasing here in B.H. Three of the boys got their tickets at the last exam., ?? oms. Broken Hill now boasts 7 active ham stations and 2 waiting for call signs. Well, now for the news—

2HX.—Eddie has taken unto himself a YF; congrats. and best of luck Back on the ham bands once more after an absence of a couple of mths. Has been wrkg sum 20MX DX on both fone and C.W. Ed vy psed wid the 6P6.

2DQ.—Dud still plodding along, tho not had much ?? at ZJ. Been on 40MX fone a bit. Says he will hve to swap his T.R.F. for a super now the new hams are starting up. Me thinks so, too, om, hi!

2ZJ.—Been on 20MX wrkg a bit of DX lately. Plenty Yanks abt at nite, but nothing much else. OZ3J was QSO'd abt 4 p.m. one day. First European QSO hr—only want a South American for WAC now, hi!

2ABP.—The Radio Club xnter on 40MX fone each wk-end. Uses input of only 4 watts on fone, but gets sum fb repts. R8 fm a VK6 is best so far.

2ACD.—Ron not going properly yet, waiting on a super. Was hrd on 40MX testing fone one nite. Vy ft Ron.

2ADC.—Rodger Wreford is the latest addition to the ranks. Using T.N.T. rig wid 5 watts input and vy nice T8 sig. Best of luck om. Give him a shout wen you hr him, boys.

Well, I gess that's the lot fer nw, so 73 is cul.

Victorian Division

VICTORIAN KEY SECTION NOTES (VK3DP)

At the September meeting of this Section at which 40 were present most interest seemed to be centred on the DASD test results. The scoring has been very high by all accounts, but I think our DX friend, 3MR, is well in the running for the VK award. Well, here's hoping, Snow. Logs for the local DASD test were handed to the Chairman and to the Judges. It was won by 3MR with 1545 points; 3OC second, 360 points, and 3CZ third with 319 points. Another Xtal for 3MR's col-

lection.

It is pleasing to note that 3MR won this year's ARRL Contest with 66,842 points. Also he was placed second in the senior and junior sections of the recent BERU test. VK incidentally won every section of this test, which says a great deal for VK hams.

There was much discussion on the restrictions to be enforced by the Valve Manufacturers' Association concerning discounts to hams. The Council Representative was asked to bring the matter before the Council for immediate consideration and action.

The Council Representative reported that the Vigilance Committee had been appointed and were already very active. They intend to enforce the regulations strictly on methods of operating, etc. So keep your eyes open for the blue cards.

At long last 3WI is on the air and has commenced operation as previously arranged.

Arrangements have been made for Mr. Gibbs of the R.A.A.F., who was a member of the Air Force rescue party which rescued Lincoln Ellsworth at the South Pole this year. A good attendance is expected as the lecture should prove most interesting.

SOME NEWS OF THE MONTH

3RX has just changed his QRA for the second time in six weeks, and is now near 3CZ. He hopes to be on the air again soon.

3XD grinding tourmaline, but no luck yet.

3QY now 3YR once more.

3BQ still hoping to build new Xmitter.

3DF-3TU building a new ten M/c exciter, 59-2a5-802.

3OJ "has gone and done it"—married last Saturday in Tasmania—3JO was the best man.

3YK building wind driven genny wild batts and dynamotor for QRQ, active only RAAFWR skeds.

3CX hooked two new countries, E.1 and FT for G7. Looking for three more for the 100. Is afraid he will get bluey for crook note!

3UX shifted QRA from Rly. over-head network es hopes to be going strong agn in a couple of weeks.

3OC undecided whether to join

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the Fire Brigade or stick to ham radio. HI!!

3DP's new full wave 40 metre ant gets out all right, but blew down four times in the gale on Sunday!

3ZW hrd on 7M/c. after a long absence. Welcome!

3XP-3DQ hrd working some FB DX lately.

3UH.—Still working W3QT every nite. What's the big idea, om?

SHORT WAVE GROUP NOTES

(By O. Davies)

The gang have already visited 3AW and 3DB and now a visit to the TSMV "KANIMBLA" is being arranged. So roll up and get the information on our activities.

3XJ made a surprise appearance on 56m/c. on the Field-day. Considering that the Xmitter was only built on the previous night results were excellent. 3KQ at Mt. Macedon being the first QSO.

3MQ also built a 56m/c. Rx and had some DX on the field-day.

3JO and 3OJ have been over to VK7 for a couple of weeks, so they missed all the good fun. Just before they left us for VK7 they had the bad luck to have the 56m/c. Beam antenna blown down in a gale. Stiff luck O.M.S.

3JH has not yet installed that system of MODULATION of which we have heard so much. What about it, Old Man?

3RQ is not so noisy of late. What about 56m/c., Charlie?

The next meeting of the Gang falls on 28th OCTOBER. Roll up and hear what we are doing.

If you have any ideas or DX notes send them in to the Sec., or better still come in to the meetings and tell them to us yourself.

A further Field-day is mooted for about November 8th. So come along to the next meeting and help to put the Group in on DX.

MALLEE NOTES

(3ZK-3HX)

Well, gang., we hope you have all fully recovered from the sleepless nights put in during the ZL contest, hi.

Conditions on all bands have been rather good, for some time, 14 mc appears to be coming into its own again and we can see some

activity on that band. 7 mc band conditions don't seem to be just what they could be, Qrm is of course the order of the day, and there is no doubt that the restriction of canned music has relieved the worst of the qrm during dx hours. 3.5 mc has been enjoying good conditions as evidenced by the number of stations appearing on that band, even a couple of W6's were heard on fone.

The highlights of the month were first the visits of Roy 51V and Auntie Ivy to most of the shacks in the north, 3WN, 3ZK, the gang at Kerang and 3EP, en route for VIM, where they were heard from the voice of the "Muddy Maribyrnong."

The second event was the visit of Ted, 3EP to 3HX, where of course a pow-wow was held, 3A1 contributing to the general qrm, hi. As is usual when one ham visits another nothing would "perk" and condx were bad, but we hope Ted enjoyed his visit.

The forthcoming debate, "The merits and demerits between commercial and amateur built transmitters," is causing some comment among the gang. VK's 3WE and 3XJ are to take the amateur side of the question and ZL's, 3BK and 4CM are to look after the other side, and should be very interesting to listen to.

The doings:—

3WN.—Jack is putting out some nice fone now, and we understand that he has invested in a generator, QRO Jack?

3HN has moved into a new shack, and as yet has not got fone going. Has been on 7mc cw.

3HR.—Charlie is still qrp as he has not got his converter going yet. Fone not so hot but mostly qsa5.

3CE.—Roy is only heard on Sunday morning skeds and sometimes Sunday afternoon. Is having trouble with house lighting batteries giving up ghost, and its a case of light no radio, radio no light hi. hi. Has a new RX.

3AI.—Frank is still on 7mc and works a few, between selling BCL receivers.

3EP.—Has decided to build a new RX, and TRF, too. Auntie Jess threatens to run the rig when OM is away, but Ted says he wont show

her how, Auntie Jess reckons she is going to get that ticket. Shades of family QRM ? ?

3OR heard back on fone, which was a little on the rough side, but no doubt Murray will soon clean it up.

3TL and 3KR are both inactive as are rebuilding for the AC and will probably by the time this is printed be back on the air.

3FF a new one, by name Jock Speer, made a debut, wid a qrp rig on 80mw cw and was heard here q5r7-8 t9 FB Jock.

3BG.—Another new one, by name Roth Jones, has by this time made his debut.

3ZK.—Has been re-named the "Mountain goat" 'cause he got a Xtal that jumped from peak to peak hi. Anyway I suppose by this time he has got the new rig, he's threatened to build for some time.

3HX will have by this time have changed over to ac, as Tom is only waiting on a couple of 6P6's.

WESTERN DISTRICT NOTES

(By 3HG)

3NK is now active on crystal control on 3.5 and 7 M.C. with a very nice signal. 3GQ and 3KX going strong on 14 M.C. according to the DX heard calling them, although details of their activities are not available. 3NG was heard to put out a belated CQ a week or so ago, but no QSO, even though several stations answered. 3XB, now located near Rupanyup, has a very nice note, but it is marred by a broad and strong backwave. 3BW is another old timer who can still be heard on 14 M.C. 3GR has put in a welcome re-appearance after several years off the air. He has completely rebuilt his rig.

3OR, while visiting this district recently on his way to 3HG when he was held up by the heavy floods. His Lancia had to be towed through "a raging torrent about thirty yards wide !!"

Of the locals 3OW is working considerable DX, including putting R6 phone to G. 3PG is back on the job again and again getting out well. 3HG has been bitten by the DX bug, the best effort so far being a two-way phone contact with CX1cc. Conditions on 14 M.C. are very good and 28 M.C. is also looking up.

FIVE MX. NOTES

U.H.F. Group)

(By VK3OF)

That lusty youngster the U.H.F. group of the Vic. branch has made rapid strides. Formed only a few months ago in response to the demand for some means of co-ordinating the scattered activities on five mx., this group has already to its credit one very successful field day, with another being arranged. This apart from the successful participation in the second 5mx. field day organised by the key section.

With an active membership of about 30 amateurs scattered around Melbourne, good work is being performed in the investigation of the vagaries of this band, investigations that are being accompanied all the time by continuous improvement all round in station design antenna construction and the like.

With gear the trend is towards more stable transmitters and more selective receivers. Either one needs the other. With the great increase in activity interference became rife from super-regen. receivers and so they have in most cases been replaced by the simple non-radiating four tube resistance coupled super het. More interest has been taken in modulators, while a great deal of work has been performed in the design and construction of the more effective types of antennas for use on the higher frequencies.

"Get together" or meeting nights are held on the first Saturday night and the third Tuesday night each month.

Early realising that the Tuesday night meeting must necessarily be taken up with reports and general discussion, technical meetings have been arranged for the first Saturday night of each month.

The first technical meeting held on the 5th September was attended by about 25 members, who spent 3 hours solving each other's problems, especial interest being taken in the noted polarisation of 5mx radiations which have occurred on different occasions making horizontal antennas necessary for the reception of signals at maximum strength that have been emitted from a vertical antenna. Directional arrays, their

effectiveness and their adaptability for portable work were also discussed.

On behalf of the Key section VK3ML, ably supported by VK3UK presented to VK3KQ the pair of 2A3's donated by Mr. Falkenberg of Byaduk as prize for a competition run in conjunction with the second five mx field day. On this field day 3KQ proved his undoubted superiority by working every station heard. He also covered the greatest mileage.

Gil Miles, of 3KQ, spoke in thanks and then promptly presented one of of his new tubes to 30F in recognition of the fact that they were associated in the establishment of a Vfc. distance record of 70 miles.

In conclusion 3TH introduced 3XA ex 7XL to the members.

At the meeting held on Tuesday, September 15th, interest centred on the results of the field day held on September 6th. Reports were received from those members who took part. 3KQ was once again declared outright winner.

Voting it a grand day members asked enthusiastically for another. After discussion it was set down for November 8th, hail, rain or snow. It was decided that serious and pre-determined tests be carried out this time especially in attempts to Qso stations in other States.

Harry Fuller, 3HF, was appointed to keep a record of all field day activities and of all technical discussions and lectures. 3JO was instructed to communicate with 7AB re tests for the next field day.

Before the conclusion 3Ny spoke on the necessity of members paying their subs., while Bob Cunningham, 3ML, gave a short lecture about a small compact modulated oscillator, a really necessary piece of gear in a five mx station.

After discussing the projected use of 3WI when A.C. had been installed the meeting concluded.

28 AND 56 MC. SECTION

(Conducted by VK3JJ)

During the winter months the only DX stations heard on 28mc. were a few W and J's, and there were very few VK stations active to work with them. An improvement was noticed early in September, and W signals increased greatly

in strength, making contacts much easier. Europeans are also starting to come through again, the best being OH7NF and D4ARR, who sometimes reach R4/5 in the early evenings. If conditions follow on similar to last year it should be possible to hold QSO's with Europeans nightly within two or three weeks.

The only African heard since the Winter was Z31H, but his signals were very weak and remained audible for only half an hour. During March and April the South Africans were at good strength for between three and five hours each Sunday, so there is plenty of room for improvement during the next month or two. W6D10 and W6GRX are very consistent and about the strongest W's, and they seem to be working plenty VK's and ZL's. J3FK has been putting through a good signal each week-end, but seems to be the only Asian ham at present active on ten.

The most active VK's on 28mc. now are 3CP, 3YP, 3XP and 3WY. The former is doing very fine work, and now has worked five continents on 'phone. He is also experimenting with directional antenna systems. 3WY's signal has an RAC Xtal tone and seems to be getting out quite well. 3ZC was active during the Fisk contest, but did not seem to be getting many contacts.

3BQ and 38D are working on the 56mc. DX question, and have succeeded in hearing the harmonics of one or two distant stations operating on lower frequencies. Interstate work should be possible at peak periods on 56mc. for the next two or three years, particularly in the Summer months, and a few fairly powerful CW stations in each State are needed to produce the results. Two way working over 500 to 1500 miles was quite common in U.S.A. during their past Summer, and they usually found signal strengths best in the early evening, between 6 and 8 p.m. Beam antennas will be helpful, for during the last 56mc. field day the addition of a directional array over the 75 mile course between 3KQ and 30F was all that was needed to lift signals from R4 to R9. Further details of the experiments carried out on the field day are contained in the notes of the U.H.F. Section.

Queensland Division

By Vic Eddy

OM Static is beginning to load his artillery for the coming fray, and habits of the longer waves of the ham band are beginning to cast eyes on the 20 metre band. Whether it be that the seasons have been changing, or whether we have conquered distance with our sensitised receivers is moot, and somewhat foreign to the purposes of this synopsis of Bananaland comings and goings.

Scribe was given a pleasant task of moving a vote of thanks to Old-timer, Bob Littler, of the technical staff of J. B. Chandler & Co., what time the genial Bob lectured us on his tour of the W's recently. Questioned re the use of 5 metres he stated that he did not observe much doing there on the occasions that he rode in radio-equipped cars. But he hands it to their aircraft. So do we, up here where distance IS DX, and where our large towns are an overnight journey apart per rail. At long last something is to be done re beacons and radio for the sky-riders, though scribe would remark that the crash of a gent in the ministry, in a rainstorm at Beaudesert 'cos the pilot could not see Archerfield does not appear to have galvanised anyone to action. VK4 is well on its way to a record year. Mention was previously made of a reshuffle in this Dist. We hope that the troubles are over, and that internicene 'yikes' are finished with. A new student class will start shortly; we have zoned the State, we have decided that 4WI will not waft a signal over the ham bands. Apropos that last — country hams please note that as we are a gang that gets no pecuniary reward for hamming, and that we have to earn our living we could not possibly have a station on the air here, laying down r9 sigs. in Camooweal or Cooktown or Cudgen every time that they in their capriciousness cared to listen. As a corollary, why do not they make use of the local traffic man, 4WT, to pass me the oil re their doings? I'm like a London bus, for the two ham sheets I supply.

AW has a super on 5 metres and his Xtal mitter is under observation

there. His co-mate and brother down there in radio exile, 4RY, are on the job. Latter checks on AW for hours on end with an e.c. oscillator type rx, and says that with xtal mitter there is no need to disturb the bats in his belfry by listening to the annoying super-regen hiss of the usual rx which blind custom has seemingly prescribed as the goods for 5 metres. Has anyone ever tried filtering out the sound of the super-regen hiss in the audio end of a rx? Pears to me, from a superficial point of view that something could be done in the audio end. Any controversy? If so, shoot. (It has been tried.—Ed.). JX, AP, HR, KH are down on 20 metres. Any comments are superfluous.

Two new members came along the last general meeting. They were 4NR and LI. Latter has a big modern station in the making. Took a casual spin o'er the dials the other night, being mildly curious to see how the boys were abiding the new regs. There was a big local, volume control wide, 'raking' a youth anent the behavior of his station. It struck me that such observations were indelicate and inappropriate, and it was satisfactory to learn at the meeting of the gang later in the week that the Avenging Angels had helicoptered over the diatribe also. When, oh when, will hams and would-be hams learn that John and Jean P. spend a lot of time down on the ham bands nowadays, and come along to the ham, very often to the one they 'canned' with the RI, on the off-chance that he may 'sling a few tips' about shortwave work.

Next meeting Mr. H. Tilse, lately returned from J, will tell the boys about it. He has an excellent collection of photos and slides. The boys fixed up 80 metres xtal fones for the Aero Club's Pageant (somebody a lineal descendant of one W. Raleigh it would appear), disqualified a YL pilot for cutting. Highlight of the effort was a duplex loudspeaker 5 metre workout between the officials' car and the broadcast station stand. They are timing the two motor cycle speed trials the same way on coming week-ends. Well, tempus fugit as the aviators' wrist-watch observed. See you fellows from the cabbage-

patch on the Fisk Trophy. That trophy will look well in VK4 for keeps.

South Australian Division

By VK5KL

During August two very interesting lectures were given in the W.I.A. rooms. On Aug. 19th members of the Adelaide University gave a demonstration of a Photophone. This showed the transmission of audio on a beam of light, amplified, then reproduced again. August 26th, Mr. Barber (5MV) lectured on "Paraphrase in Audio Amplifiers." The Institute also exhibited a 5 metre short-line control oscillator and a multi-vibrator in the University exhibition.

HAM NOTES

5LF.—One of the old-timers came to a institute meeting. Len is getting back on the air again.

5CM.—Is hrd on the air again.

5WP.—Bill has sold most of his gear to buy that "Wedding ring." Best luck.

5DQ.—Was also present at the last meeting.

5GW.—Has transferred to Narracourt, so won't see much of him now; made a big score in the D.J.D.C. contest.

5RX.—Was also doing well, but went to a party which left its trademark next day. Hi!

3BQ.—Arrived in V.I.A. and was rushed around seeing things by 5DA and 5BY.

5FM.—Now member of the vigilance committee. Pete was tickled pink when he first hrd 5CF at the Hummicks.

5FBX.—Visited W.I.A. and voiced the opinion of several country hams.

5JT.—Better known as op. at VKZ is staying at Burnside holidaying; has a 19 tube super 25 watts audio output. Don't need a Xmitter hi!!

5A1.—Has not trouble to QSO W's on fone.

5JC.—Keeps him company.

5CR.—Has nice fone, also 8 tube super.

5TR.—Has been on a bit.

5ZX.—Still rebuilding his perk.

5MD.—Doc is making a 5 metre transceiver.

5MK.—Hrd u on 40 at the Hummicks, Jack; must be getting out.

5LL.—Has increased power. QSO ed a K6; also VK6 on fone F.B. Luke.

5TX.—Hrd on 80 metre fone.

5LB.—Also on 80, mind the BCL'S Lionel.

5LD.—Hrd in D.J.D.C. How did u do Launse? Well, chaps, by time this is printed the 1936 Fisk trophy contest will be over. May the best State win.—73's, Clarry.

VK5 SHOOTS THE WORKS ON FIVE METRES

By VK5KL

Sunday, Sept. 6th, 1936, dawned a beautiful clear day, and the stage was set for a few of VK5's 5 metre enthusiasts to go into action and show the community that this band was not dead in this State. Mr. Bowman (5FM) had offered to provide transport to the South Hummicks near Pt. Wakefield, where on a high rise Mt. Lofty can be seen easily. Accompanied by Mr. Lloyd (5HD) and Mr. Castle (5KL), Mrs Bowman and 5KL's YL, the party left town at approximately 9.20 a.m. for the long tour. Meanwhile Mr. Farmer (5GF) journeyed to Mt. Lofty, erected his gear and 4 element beam to while away the time kept contact with suburban stations, 5WI, 5ZY, 5BY and 5KD, Pt. Adelaide, was also active. 5GF's gear consisted of P.P. T.N.T. 201A's telefunken Modulation Pwr supplied from a vibrating reed arrangement and super regen Receiver.

The party, arriving at the Hummicks, picked a suitable position and got going to get the gear in action. A attempt was made to contact on 40 with 5W1 first, but failed. Too much time was lost doing this, so as soon as the 8 element beam was erected, not marred by the fact 5FM got covered in bull ants, the 5 metre gear was connected up. The receiver being first to get going sum listening was done, but nothing hrd. The transmitter was next, and after a few tests, when no R.F. could be got and to make matters worse the milliamper meter had been left behind, a call was given. Changing to the receiver instantly 5GFX was heard calling us (his sigs R8-9) and coming through like a ton of ash cans. 5KLX's sigs. were only

R 3-4 at the other end, changing to the Pickard antenna for transmitting which we were using for receiving our sigs were still R4 says a lot for the beam antenna. Hi!

Keeping QSO with 5GF the other stns. were looked for, but nothing could be heard of them. The contact took place at 1.55 p.m. and so, as the hour was getting late, also 5GF's sigs. weaker, the gear was packed up and the long journey made home again with all thoroughly satisfied that the trip had been worth while. H.T. was supplied from a genemotor working off the 6 volt car battery plus 120 volt "B" batts. The transmitter was P.P. T.N.T. 201A's 77 sp amp 38 modulator super regen receiver. The airline distance works out to be 75 miles, quite a step from 10 miles, the old record for a QSO in VK5, but, hark, ye! VK's move is in the wind and before the year is out VK5 will be claiming the Australian record.

To cap up this tremendous effort news comes through that two VK3's and one VK2 hrd a unknown stn. at approx. 5.35 p.m. E.S.T. This checks up with the time that 5WI was on QSO 5ZY. Another news flash, 5LR of Renmark has been heard in Broken Hill. Boys, we are going places and if a interstate contact doesn't take place this summer then the Gods are unfair.

Tasmanian Division

By VK7JB

The monthly meeting of this division was held in the club rooms on the 1st Sept. 1936. The attendance was a marked improvement over the majority of previous monthly meetings, which was very encouraging in view of the very interesting lecture delivered by Mr. Barker (Western Electric engineer, VK7). The lecturer dealt with his experiences during the war and after with radio.

Mr. Barker was sparks on the Shackleton Relief Expedition Ship and afterwards operator on several land stations in South and North America. An endeavor is being made to form a Cairo Survey Committee to report on the doings of commercial stations with a view of

widening the Amateur Bands. The vigilance committee for VK7 has been appointed and consists of Mr. E. J. G. Bowden, D.R.I., Messrs. Hooker, 7JH, and Moorhouse (W.I.A.) and Mr. C. Walch, 7CW as the independent member.

All VK7 stations are now crystal controlled on 200 metres as the outcome of the new regulations concerning QRM with VK5-6 "B" class stations.

MEMBER'S ACTIVITIES.

7YL, QRL, building 8 toob all wave receiver for Sorell State School. Vy fb job, too, believe me. Finds time to work on 40 mx fone, Sunday a.m.'s. Believe me 80 mx fone caused a riot among the B.C.L's. Joy hi! 7KV. Busy in Fisk Contest and to date has worked all States on 20-40-80-160 and VK6 on ten. Has induced 7YL down to 5MX to keep him company. 'Ware of Bing Crosby, Keith. Hi!

7JH.—Has enlarged his shack and can now take down the One Way Traffic sign, or was it One Man Capacity, Jack? Taking a passing interest in Fisk Test, between shifts.

7PA.—Quiet on S.W. lately. Installing QRO Bottles for Oct. Contest, I gess. Hrd regularly on 200 mx.

7CL.—For enthusiasm in Ham Radio, I gess I'll hand you the first prize, Merv. Carted all his gear, including modulators, up to Launceston while on 2 weeks' vacation.

7CT.—"The Voice of the Bush" pegging away on 80 mx, C.W. and grid modx. Has a bet on with 7YL as to who makes W.A.C. first. 7BJ Operator at 7ZL now. Has also acquired a new Mo' Bike, and has now discarded his crash helmet. Careful, Joe!

7DH.—A new ham hopes to be on the air shortly as soon as the licence arrives.

7LJ and 7CW.—Hrd regularly on 200 mx.

7JB.—Active in Fisk Test when Power QRM permits; also preparing for DX contest in Oct. Am offering a dud 210 for a recipe on incubator elimination (gelignite barred).

Our Sec., "Chum" Moorhouse has
(Continued on cover 3.)

R.A.A.F. Wireless Reserve Notes

Officer Commanding: Flying Officer R. H. Cunningham, 397 High Street, Glen Iris, S.E.6, Victoria (VK3ML).

District Commanders—

Second District, N.S.W.—A. G. Henry, Clareville Avenue, Sandringham (VK2ZK).

Third District, Victoria—Pilot Officer V. E. Marshall, 3 Myrtle Avenue, Kew (VK3UK).

Fourth District, Queensland—A. E. Walz, Sandgate Road, Nundah (VK4AW).

Fifth District, South Australia—F. M. Gray, 52 Ormond Grove, Toorak Gardens (VK5SU).

Sixth District, West Australia—S. J. Madden, Dundas Road, Maylands (VK6MN).

Seventh District, Tasmania—R. Cannon, Goldie Street, Wynyard (VK7RC).

FEDERAL NOTES

It has always been the aim at H.Q. to make the Reserve notes in "Amateur Radio" as free from the official aspect as possible and to use the medium, which is common to all members, as a place where general activity and personalities may be discussed. Many, however, seem to be reluctant to send in monthly notes to their D/C for no other reason than the want of energy apparently. Maybe it is hard to think of something of interest to send along, but, what a small task that is compared with the effort that a District Commander must put in to write the notes for his whole District.

Some time ago certain honorary awards were made for traffic handling for a District, Section and individual. The only reason why they have been dropped is because members were not sending in their traf-

fic returns. No instruction was given for this cessation and, strictly speaking, the figures should still be forwarded monthly. It will be left to reservists and D/Cs to display their interest in these awards and next month will show the results of this appeal.

It is intended to publish one or more photographs monthly of Reservists together with notes dealing with their history and general ham activities along the lines of the "Hamdom" page in QST. The invitation is open to all members to forward this material as soon as convenient. Photographs should be as near to quarter plate size as possible and preferably of the operator seated at the operating table. Remember, this is not a station description matter, and the man behind the key is the main object. Glossy prints with well developed detail make the best blocks.

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Hamads

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(Continued from Page 27.)

Queen "Lizze" perking O.K. now es receiving 7JB R9 Plus hi!

7AB.—Also representing VK7 in Fisk Test, working on all bands from 10 to 160 mx. Why not 5 mx Doug? Only 200 miles of water to VK3!

7AM.—No news.

7CJ and 7KR.—Very active judging by the pile of cards received here for despatch. Hear your fone (40mx) down here regularly,

7LZ working plenty of W's on 40 mx.

7JW and BQ mostly on 200 metre fone, but hrd 7BQ on 40 mx fone recently. Vy fb es R9 down here, Len, altho ur xtal has a bad habit of double spotting.

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